ABSTRACT OF THE DISCLOSURE

Protein having an erythrose reductase activity; a DNA encoding the protein; a cell to which a DNA has been transferred in a manner such that the DNA is capable of expressing an erythrose reductases type III, II or I the DNA encodes; and a method for producing erythritol, comprising acting the erythrose reductases type III, II or I or a cell to which erythrose reductases type III, II or I has been transferred in a manner capable of expressing the erythrose reductases type III, II or I on D-erythrose and harvesting the produced erythritol.